OHIO CULTIVATOR.

A Semi-Monthly Journal of Agriculture and Horticulture.

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OHIO CULTIVATOR.

A Semi-Monthly journal, devoted to the improvement of Agriculture, Horticulture, and the Mecanic Arts—and the promotion of domestic industry.

M. B. BATEHAM,
EDITOR AND PROPRIETOR.

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Address M. B. BATEHAM, Columbus, O.

Washington County Agricultural Society.

At a meeting of farmers and friends of agriculture, held pursuant to notice at the Court House in Marietta, on the 24th of June, Hon. Joseph Barker was called to the Chair, and Darwin E. Gardner appointed Secretary. The committees appointed at a previous meeting reported that they had procured seventy-five signatures to the constitution, and produced the original rolls; whereupon it was

Resolved, That the meeting proceed to organize the Washington County Agricultural Society, by the election of officers.

The following gentlemen were elected officers of the Society, to serve until the 14th of October next, (the annual election:)

President, Joseph Parker; Vice President, Julius Deming; Treasurer, Robert Crawford; Secretary, Wm. R. Putnam, jr.; Managers, J. W. Dana, B. C. Bailey, Wm. Devol, J. D. Chamberlin, John Algeo.

On motion, it was

Resolved, That it is inexpedient to draw on the county treasury the present season.

It was further

Resolved, That the Board of Directors be requested to make preparations for an exhibition this fall.

Resolved, That the proceedings of this meeting be published in the Marietta Intelligencer and the Ohio Cultivator.

Clark and Madison Agricultural Society.

The first annual meeting of the Board of Directors of the Clark and Madison District Agricultural Society, was held at Charleston, on the 27th day of June, 1846.

A quorum being present, among other proceedings, it was

Resolved, To hold the first Exhibition and Fair at Springfield, Clark county, on the 15th and 16th of October next.

The Board further

Resolved, To meet at Charleston, on the last Saturday of August, at which time and place, the committee appointed to obtain members are required to make return of the names of members and money which they may secure.

A partial list of premiums has been agreed on, and published in the county papers. Full particulars will be announced in handbills previous to the day of Exhibition.

Harrison County.

At the meeting in the town of Cadiz, on the 29th of May, it was resolved to form an Agricultural Society for the county of Harrison, and a committee was appointed to prepare a constitution, to be presented at a meeting to be held at the same place on the *first Saturday of August*, when officers will be elected, &c.

It was also resolved, that a committee of one person in each township be appointed for the purpose of obtaining the names of members for the Society, and that a copy of the constitution be furnished them for the purpose of procuring signatures, as soon as it is prepared.—The following are the names of this committee:

Samuel Douglass, of Cadiz; Abraham Holmes, of Short Creek; Johnson Craig, of Green; John Hastings, of Moorefield; Jacob Lemmon, of Freeport; Samuel Richey, of Washington; William McFarland, of Athens; M. F. Burkhead, of Franklin; A. F. Croskey, of North; Luther Rowley, of Monroe; Wm. Welch, of Rumley; John Gruber, of German; John S. Lacy, of Stock; James P. Bell, of Nottingham; and Matthew McCoy, of Archer.

Cuyahoga County.

We find in the Cleveland Herald an account of the proceedings of a meeting held, pursuant to notice, in that city on the 27th of June; and a form of constitution and by-laws, subsequently prepared by a committee appointed for the purpose, to be submitted to another meeting, appointed to be held on the first Saturday in August next.

Three persons in each township were appointed a committee for the purpose of visiting the farmers of their respective districts, to solicit them to attend the next meeting, and become members of the proposed Society.

The form of constitution reported by the committee, we think, is a very good one; but we would suggest whether it would not be as well to conform to the regulations of the State Board of Agriculture, in the number and style of the officers, so as to secure some degree of uniformity in the organization of the Societies throughout the state. We do not know as this will be deemed essential to a compliance with the law of the state, but we think it may bear that construction.—ED. O. CULT.

Ashtabula County.

The Ashtabula Sentinel contains the proceedings of a meeting of the officers, at which it was resolved to disband the old organization, preparatory, we presume, to the organization of a new Agricultural Society in that county. The Treasurer's report shows a balance of $42,50 in his hands, subject to demands amounting to about $6. The following resolution was adopted:

Resolved, That all the rights, avails, goods, chattels, moneys, and effects, with the books and papers of this Society, be, and they are hereby, assigned to any Agricultural Association or Society that may hereafter be organized in this county under the act of the General Assembly of this state, for the encouragement of agriculture, passed February 27th, 1846.

Portage County.

Appended to the list of awarding committees for the Fair of the Portage County Agricultural Society, published in the Ohio Star, we find the following supplementary premiums offered:

For the best Essay on any of the following subjects:

1st. Farming, as compared with the professions and other occupations;

2d. On ornamental gardening;

3d. On the best means of rendering productive exhausted clay soils.

Best piece of agricultural music performed at the Fair, diploma.

Columbiana County.

The annual Fair of this county is appointed to be held at New Lisbon, on the 14th day of October. The list of premiums, &c., is published in the county papers.

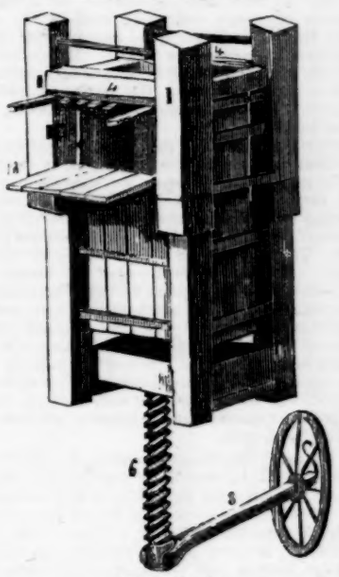
Ag. College at Mt. Airy.

We heartly respond to the following sentiments, uttered by that sterling pioneer agricultural paper, the American Farmer, in reference to the above named proposed institution. We believe there are some fathers in in Ohio who would be glad to send their sons to this college, if commenced as proposed.

AN AGRICULTURAL COLLEGE.—We are highly gratified to learn from the Farmers' Cabinet, that James Gowen, Esq., of Mount Airy, near Philadelphia, has purchased the beautiful grounds adjoining his residence, known as "Mount Airy College," and we are still more highly gratified to learn that he has it in contemplation to establish an Agricultural College, wherein the youth of our country may learn the business not only of farming, but that of horticulture, practically as well as scientifically. And we are sure that every friend of agriculture throughout the land, who may be connusant of the high attainments, the untiring zeal, and successful enterprise, which have ever distingushed this gentleman, will hail this announcement with feelings of unmingled delight; for who is it that know him but appreciate the well-directed energies, enlightened views, and indomitable courage which he has displayed throughout all his laudable and more than successful efforts to improve the soil, elevate the moral and intellectual character of husbandmen, and expand the rescources of the country.

We repeat it—we are gratified to learn that Mr Gowen is about to establish an Agricultural College at Mount Airy. The location is most eligible, while the ample rescources of that gentleman will enable him to call around him the best instructors to carry out the views of his own ripe and well digested mind.

Feeling a deep interest in the success of this enterprise, we call upon the press of the country to take such steps as will spread a knowledge of its projection before the agricultural community.



Hay Press.

At the request of a correspondent, we give a representation of a hay press. It may not be the best form known, but it is said to be convenient and effective. The principle and mode of construction, can, we think, be easily understood from the engraving. (We copy from the Farmers' Dictionary.)

'It consists of four upright posts strongly framed together, within which is a chamber of stout plank of the size of the intended bundle of hay. The press is firmly fixed between the lofts of a barn, the hay being thrown in above, and the horse power applied to the sweep (8) and screw (6) below. The sides of the chamber are opened to remove the pressed hay by doors hung upon rollers (18), and the upward pressure of the screw is resisted by a strong cap (4), which is pushed backward or forward at pleasure.'

Editor's Rambles.

Continued from last number, page 98.

THE MUSKINGUM VALLEY — WASHINGTON COUNTY, &c.

We have again just returned from a ten days' trip — and a very pleasant one it was, excepting that the weather kept us rather too forcibly reminded of the fact that we had wandered into the extreme sourthern portion of the state, and also prevented us from seeing as much of the country and the farming as we should have done had we met with a less *warm* reception. We regret, too, that, owing to the late day of our return, we have not time to prepare more than one half of the notes we had designed to publish of this trip.

AT ZANESVILLE we begin our notes. On alighting from the stage at the Eagle Hotel, our attention was arrested by one of the most tasteful and pleasing improvements of which any western town can boast — namely, a beautiful FOUNTAIN, (*a la Croton,*) recently erected in front of the Court House, and directly opposite the hotel. It is abundantly supplied with water from the public reservoir, which is more than a hundred and fifty feet above the city. We designed giving an engraved representation of the fountain in this number of our paper, but our engraver cannot prepare it in time. We shall, therefore, omit a description of it till our next.

From Zanesville, there is a line of steamboats running between that place and Pittsburgh, via Marietta. On one of these, named May Queen, a very comfortable boat, with a gentlemanly young captain, we took our trip down the Muskingum. The water was in good stage, and the scenery along the river very beautiful; though after going ten or fifteen miles, there is but little fertile land, or evidence of cultivation in view, till we arrive at McConnellsville. Here the May Queen was very opportunely detained about four hours taking in freight, which allowed us an opportunity to visit our friend Dr Barker, and several other citizens of that place. Dr B., as is well known, is an enthusiastic and successful cultivator of fine fruits. He is also a farmer, and some of the best corn we have seen is on a field of his adjoining the town. This part of his business, however, is mainly conducted by tenants. We took a ride with him to a hill farm about a mile back of the town, on which is the orchard where the borers, mentioned in another part of this paper, are injuring the trees. From what we there saw, we are inclined to believe that these insects do not attack perfectly healthy trees, but begin their work where the bark is dead or diseased, and then extend the mischief to the sound parts adjacent, so as rapidly to destroy the tree. As is stated by Dr Barker, we found them only on trees that had been bent and injured. Dr B. has a fine collection of apples, embracing most of the old well known kinds from Washington county, with many approved newer varieties from the east. His garden is now filled with young trees, and he designs next year to commence a regular nursery. His intimate knowledge of fruits, and his taste for such pursuits, eminently fit him for that business.

There is much attention paid to the cultivation of fruit at McConnellsville. In several gardens, as those of Mr Conklin and of Mr Sprenger, we observed large grape vines, very heavily laden with fruit. The last named gentleman tried an experiment, the past year, in the manufacture of wine from a mixture of Isabella and Catawba grapes. The result was, a wine of very good flavor and strength. He added a little sugar and brandy to the juice, which we think might as well have been omitted.

Morgan county consists mostly of hilly land, with creek and river bottoms of limited extent. The soil appears to be generally inclining to clay, and with thorough tillage becomes quite productive. Wheat and tobacco are the staple crops — the latter appearing to be the chief article of export, with the exception of *salt*, which is manufactured in large quantities from numerous salt wells along the Muskingum river.

At Beverly, (Washington county,) we left the May Queen and visited a number of our friends. This town is mostly new, and very pleasantly, as well as advantageously situated, being surrounded by a fertile and populous farming district, and having excellent water power, formed by the lock and dam on the river, on which is a very large flouring mill belonging to our friend McIntosh, a large saw mill, &c. Mr John Dodge is the principal proprietor of the town, and one of the earliest settlers of that region. We are indebted to him for the loan of a horse, and other attentions. He has a good farm adjoining the town, managed by himself and son, and lives in a comfortable, easy style, not even troubling himself about his house being hindside before, or the appearance of that —— in the pathway. But he promised us he would remedy this, so we do not mention it!

The Farm of J. Washington Dana is about two miles below Beverly, on the Muskingum, and is celebrated as one of the largest and best managed farms in the state, and especially for the number and excellence of the sheep kept thereon. The proprietor, who was born on the estate, is distinguished for his intelligence and skill as a farmer, as well as for his good qualities as a citizen and neighbor. We deeply regretted to find him confined to the house by sickness, and that, too, of a character not likely to be speedily recovered from, though we hope and believe he will be restored. His farm embraces over 1000 acres of improved land, a good portion of it bottom land of excellent quality, the rest suitable for sheep pastures. His flock of sheep numbers about 1600 head, and are mostly a fine grade of Saxony. The wool had been all shipped, so that we could only inspect a few small samples. His fields, we observed, are mostly of small size, and his sheep are divided into flocks of a few hundreds, allowing them frequent change of pasture. The crops of wheat, corn, and other produce, gave evidence of good tillage as well as good soil. We could not obtain as full account of Mr Dana's farm management as we desired, owing to some fatigue which he experienced from much talking.

Broom Corn is raised, and brooms manufactured on a pretty extensive scale in Washington county. Mr Pomeroy, who resides a few miles above Beverly, informed us that he has about 350 acres under cultivation, and had about the same quantity last year. He manufactures the greater part of the product into brooms, and sends them to Cincinnati, Pittsburgh, &c. There is another large establishment of the kind at Marietta, belonging to Mr Temple.

From Beverly to Marietta, the land along the river is, much of it, of the finest quality, and the appearance of the farms and dwellings gives evidence of substantial wealth and comfort. This is particularly the case about Coal Run, and the beautiful town of Lowell. We were sorry that our time and mode of conveyance would not allow us to make calls along the road.

Marietta, most of our readers are aware, is the oldest town in the state, being the place where the first permanent settlement of white persons was made — in 1788. — In addition to its interesting historical reminiscences, the town is one of uncommon beauty, situated at the confluence of the Muskingum and Ohio rivers, and surrounded by a picturesque and highly fertile region. The early settlers came from Massachusetts and Connecticut, and their descendants have cherished and perpetuated, in a marked degree, the virtues that characterize the New Englanders. Hence we find a population distinguished for industry and intelligence, and warm friends of religion and education, thus rendering the town a most appropriate place for institutions of learning. Of these it has a college, with which is connected a large and flourishing academy — a female seminary, and numerous other schools. The college is in a flourishing condition, and its facilities are about to be greatly increased, by the erection of a spacious and tasteful new edifice, now under way, designed for lecture rooms, cabinets, library, laboratory, &c.

A visit to Dr. Hildreth's was among the most pleasurable incidents of our rambles. We found the Doctor, on the morning of 'Independence day,' busily engaged in compounding a plaster for a wounded fruit tree. In the garden and in the house, we found him surrounded with evidences of his devotion to science and horticulture. His garden contains a very large and choice collection of fruits, vegetables, and flowers—many of them quite rare, and all giving evidence of much skill and care in their cultivation. And in the house are extensive cabinets of minerals, shells, Indian curiosities, &c., and the best collection of insects that we have seen in the state—Dr. H. having given particular attention to some branches of entomology. Of books and paintings, also, his collection is very great, and some of the pictures possess rare interest in connection with the early history of Ohio. This leads us to remark, that Dr. Hildreth is now at work upon, and has nearly completed, a volume which he designs to present for publication, to the Historical Society of Cincinnati, embracing a history of the earliest settlement and settlers of Ohio, with many exciting incidents of early times, and facts not before published. We were allowed to peruse some pages of the manuscript, and inspect the accompanying drawings, and from what is known of the ability and resources of the author, there can be no doubt that it will form a very interesting and valuable work—a book which few real Ohioans will be willing to be without, and one of peculiar interest to the descendants of the early settlers, whose enterprise and bravery it records. We hope it will be speedily got to press by the historical society, and issued in good style; also that it will be so managed as to afford the author some compensation for the large amount of labor bestowed upon it—though we are aware that he did not undertake the work for the sake of such reward.

Mr. Ward's Farm, 'Cleona.'—Decidedly the most tasteful specimen of farming that we have found in the state, is a 'fancy farm' belonging to N. Ward, Esqr., a wealthy citizen of Marietta, beautifully situated on the Ohio River, two miles east of town. It embraces nearly 100 acres of first rate land, all enclosed with board fences having locust posts; the outside fences and the bank of the river, lined with shade trees; also a row of trees on each side of the road through the farm, and for half a mile or more along the turnpike road. On each side of the entrance gate is a brick cottage, in the English lodge style, and on the gateway, as on the farm house fronting the river, is painted the name *'Cleona,'* which is the classic cognomen given the place by the proprietor.

'Nonsense!' we think we hear some old plow-jogger exclaim, 'what is the use of all these fancy notions? does he raise good crops, and make *money* by his fancy farming?—that's the question.' Well, friend, we will answer you: In regard to the first point, Mr Ward does raise the best of crops, of all kinds, on this farm—better, as a whole, than we saw on any other farm in the county. As to the making of 'money,' we did not enquire particularly, for we do not believe in making that the chief aim of life. We have no doubt that, on the score of real happiness, Mr Ward's improvements and expenditures at Cleona, have rendered him a profitable return; and we doubt not that the influence of his example has had a very salutary influence on the neighborhood. Happy should we be, could we find Wards and Cleonas in every neighborhood in the state.

Our printers compel us to stop here; so we must defer an account of the rest of our tour till our next.

Cutting and Curing Hay.

From notes of a discussion on 'the proper stage for cutting grasses, and the best modes of making hay,' at the seventh agricultural meeting in Albany, published in the Cultivator, we give the following:

Mr Pement said he had formerly been in the habit of cutting timothy grass quite late. It was easier cured after it had got pretty ripe. But he found in using hay thus cut, that it wanted substance, and he had ascertained that the best time for cutting was while the grass was in blossom. In making clover hay, he had adopted Judge Buel's plan. He thought it best not to expose it much to the sun. His practice was to cut in the morning, let it lay till noon, and then cock it, and let it sweat for two or three days, according to the state of the weather. On putting the hay in the barn, he had used about four quarts of salt to the ton. Hay thus managed came out in the spring very bright and sweet. In the ordinary way of curing clover hay, the best parts are wasted.

Mr Howard was aware that there were different opinions as to the proper stage for cutting grass; but he thought the observance of certain principles might afford a guide in the case. For example, the stems of grasses were filled, just before the formation of the seed, with a starchy or saccharine substance. In perfecting the seed, the stems were exhausted of this substance, it being consumed in forming seed. Now, if the herbage is the object, the plant should be cut before the nutriment has passed from the stems.

If seed is the object, the plant must, of course, be allowed to attain a good degree of maturity. Hay made from ripe grass may 'go further,' or 'spend better,' as the argument is; and it is admitted that this may be true, for animals are less inclined to eat it; but this is no proof that it is more nutritive. He spoke of the different modes of curing hay, with nearly all which he said he had been acquainted. Clover hay was altogether better when cured in cock, than by any other mode he knew practised. All hay was better for undergoing, to some extent, a sweating in the cock. Coarse timothy was thus rendered much softer, and was less strawy and stiff, and every description of hay was less likely to be 'mow-burned.'

Mr Betts was not in favor of mowing a great deal of grass while the dew is on. He was in the habit of spreading the swaths as soon as the ground was dry, and he always had it well cocked up before night. The next day, if the weather was good, he opened it again: if it did not dry enough, he put it together again; but his object was to get it so that it would do to put it in the barn. He was in favor of using a little salt with it. He had sometimes found his hay heat too much in the mow. From being hurried, he had occasionally put a load in the barn too green. To stop the heat and fermentation which had ensued in such cases, he had made holes in the hay with a crowbar, and scattered in salt. In this way he had stopped the fermentation, and saved his hay in very good order.

Mr Garretson, of the assembly, from Dutchess county, said he generally cut from 150 to 200 tons per year, chiefly timothy and red-top. He generally begun when the grass was in blossom. — His method was to cut in the morning, spread the swaths lightly, and in the afternoon put it in cocks. The next day, if the sun came out, it was again spread, and, if made enough, put in the barn with a little salt sprinkled on it. About three quarts of salt to the ton was as much as he used. There was danger of using too much. — He had formerly used more salt, and was satisfied his animals, particularly sheep, had suffered by it. It occasioned scouring, and, by keeping their bowels out of order for some time, they died. — He usually got about two tons to the acre. In the latter part of the season, it would sometimes make enough in one day.

Mr Mack always directed his men to make hay as rapidly as possible. He had often made it and put it in the barn in one day, and never had better hay. He was always particular to secure it from dew when it must be left over night. It is said by some who had much practice in making hay, that it is never injured from its own internal juice, but only from rain or dew.

Mr Sotham did not like the plan of salting hay, neither did he like the hay that was made in one day. If it could be so made that it would take no hurt in one day, it must have been too dry for good hay before it was cut, or else very light bur-

den. He would as soon have good bright straw for cows or sheep, as timothy hay after it had gone to seed. He cuts clover when a part of it is in blossom and part in the head; cuts all his grass early. It takes longer to make hay cut thus early; but for cows, and sheep especially, it was a great deal better. The objection to salting hay was, that animals were forced to eat salt, whether they wanted it or not, and it made sheep scour. His hay came out of the barn of a bright green color, and his stock would fatten on it.—There was another great advantage in cutting early: the roots retained their life and strength better, and the after feed and future crops were much more abundant. He did not like timothy for hay; he never saw it in England; the farmers there thought it was too coarse and wiry for stock. Rye grass made good hay; would yield in England two tons per acre. Pacey's was the best variety. Red-top made good hay. He had tried sainfoin; it did not come up well; there was always a difficulty about it in this respect, because the seed was good only a short time; it could hardly be brought across the ocean and vegetate. If we could get it here, it would be very valuable, especially for dry lands. As to pasturing mowing lands, some land would not bear it, particularly if wet; but he fed his dry lands very close, in the fall, with cattle and sheep, and experienced no damage from it.

Judge Cheever said he would cut his clover in blossom — not sooner. He would let it take the sun one day, but not enough to have the leaf break off; then put it in small cocks and cure it, until, by a few hours' drying, by turning over and breaking the cocks, the fluids would be so far out of it that it may be housed without hurting. The length of time necessary to cure it, will depend upon the state of the weather, and the larger or smaller growth of the crop. Upon this the farmer must exercise his judgment.

He would not cut timothy until it had passed out of the blossom. Professor Davy, in his Agricultural Chemistry, says that 64 parts of clover hay, cut in blossom, produced 10 parts of nutritive matter, and the same taken in seed; timothy, 10 parts in blossom and 23 in seed. This, in timothy, is probably too much; but that the nutritive matter in timothy improved after the fall of the blossom, he had no doubt. Red-top comes to maturity later, and he did not think there was much difference whether cut in blossom or soon after. He believed timothy cut in blossom would, pound for pound, produce more milk, when fed to cows or sheep, than it would cut afterwards; but for horses and other stock, he thought it more nutritious to stand a little longer. It certainly improved in weight.

He preferred mowing his hay, as far as he could, when free from dews or water. He let the swaths take the sun a few hours, until the top got a little wilted or seared, before turning. It thus held up the greener parts when turned over and spread, and permitted the air to circulate under it. It also gave the ground between the swaths time to dry, which was important in hastening the curing. In this way, he avoided the necessity of turning the hay after being spread, which was one of the most tedious processes through which the hay had to be passed, and of course the most expensive. He never permitted his hay to take a dew when it had sun enough to wilt it considerably, if he could help it. The dew discolored it, and he had never been able to restore the fine fresh color afterwards. He preferred letting his hay stand over night in the cock. He could then better tell of its fitness to be housed. It is very easy to break up the cocks and give it more sun if necessary, and the slight fermentation or sweating in the cock, which is checked and dried off in carting, is a great preventive against heating in the mow. Hay heated in the mow is sure to be discolored. Some people insist that it is not injured for feeding, especially to cattle. It may be so. I know that flour, corn, or oats, which have been heated until they are musty, are thought not so good. I do not know why hay should be.

On the approach of rain, I always put all the hay that has had any sun of consequence into the cock. If the storm is a long one, it may turn yellow, so that it cannot be restored, but it will retain most of its nutritive matter and its weight; whereas, if left spread out to take the rain, it loses both, and is much worse discolored. I never use salt upon my hay but upon compulsion. When the weather is good, I dry my hay sufficiently to keep, and as soon as I can I house it; but sooner than leave it out to take a storm, even in the cock, I would put it in a little short dried, and apply salt to save it, as I would sooner have it salted than musty.

Dr Lee thought it the best way to mow grass after the dew was off; spread it, dry it as much as possible, and rake it into winrow. If it was dried enough, — and it would frequently be so,— he would load it from the winrow, and save the labor of cocking it up.

Turnip Culture.

Were American farmers fully apprised of the value of the turnip crop in Europe, it is quite certain they would make greater exertions to give it a more general introduction into this country. Turnips make the pork, beef, milk, butter, and cheese of England. 'The new system of husbandry' is based upon the introduction of the turnip culture. British farmers have also learned that feeding sheep upon the turnips in the field, is a capital plan to improve the soil.

But as the season is now at hand for sowing, a few practical hints will not be amiss.

1. *The soil must* be rich, loose, and free from noxious weeds. Fresh land is the best, but cultivated fields will answer, if they have the strength of soil, [and not too dry.] The very best spot of ground for turnips is an old cow yard. If the land is not rich, it must be made so.

2. *The preparation of soil* is an important item. *Deep* plowing is indispensable, as well as frequent plowing before sowing. It is a good system to break the land very early in the spring, and continue to plow it every two or three weeks till June or July. By this means it will be freed from weeds, and rendered strong and mellow.

3. *The time of sowing* is a matter of considerable consequence. Some aged farmers say, sow the 6th of August; while others tell us to *sow on the 25th of July, wet or dry;* but there is no doubt the date should depend very much upon contingencies. It is a safe plan to sow every two weeks, or oftener, from the first of June to the last of August. I once heard a successful old farmer say, 'plant all kinds of crops, and try all seasons, and you will be sure to hit the right crop and season.' There is truth in it. About the last of July or first of August is generally the best time.

4. *Mode of sowing.* — If the land is fresh, the sowing may be performed broadcast; but care should be taken that the plants should not grow too close together. This, however, is the *lazy mode* of cultivation, and should not be recommended, unless the land and preparations are every thing they should be, and the farmer or gardner cannot have the requisite labor performed. The best plan is to throw two furrows together by the use of a light plow, and let the rows be two feet apart; then open the ridges with a hoe, sow the seeds and rake them in.

5. *After culture.* — In this department there are three very essential matters. 1st. Keep the land free from weeds and grass; 2d. Stir the soil frequently; 3d. Thin the plants to such a distance as will prevent interference with each others growth.

6. *Harvesting.* — This need not be done before November. Pull up the roots carefully, haul them together, cut off the tops and tap-roots, raise the ground about six inches, and put them in piles of from 10 to 20 bushels, cover with earth 10 inches thick, and all will be safe till spring. — There are different modes equally successful. — The tops may be profitauly fed to cattle and sheep. — *The Naturalist.*

Truth.— A man who loves his family will always take one or more newspapers, and a man who desires to train up his children in the way they should go, will pay for his paper.

We hate some persons because we do not know them; and we will not know them because we hate them.

Insects in Apple Trees.

Mr Bateham: While my orchard was young, and in the possession of another person, several of the trees were bent by cattle and horses, so that the trunks and tops are far from being perpendicular with that part of the tree immediately above the ground.

I had noticed for some years, that the upper surface of those bends were unhealthy, the bark pealing off and leaving the wood dry and exposed. At first, I supposed this to be the effects of the rubbing of cattle or horses, but about a year since, I discovered the true cause. On approaching the affected trees, I observed several insects, or bugs, of a variety different from any which I had before seen or recollected to have read of, coursing up and down the upper surface of the bends in the trees, and immediately attempted to capture some, but failed, until I had learned more of their habits. If I attempted to take them by sudden assault, they turned two or three times around, let go their hold, and dropped in the grass below, or expanded their wings and flew away, with a noise similar to that made by the large green blowing fly. By stopping several feet from the tree, I was enabled to observe their motions, for they continued their gambols up and down the tree, stopping suddenly, and then proceeding with rapidity. Occasionally, one might be seen drumming, either with its wings or tail, on the hard wood, producing a noise very similar to the feeble rattle of a rattlesnake. They were seldom seen, except when the sun shone warm on the wounded part of the tree. When alarmed, if they flew, and I remained quiet, they generally returned immediately to the trunk of the tree, and struck it with such force as to be heard for several feet.

If I approached the tree quietly and cautiously, they remained on the body, and whenever I could throw the shade of my hand over them, I could place the palm directly on them.

I intended to have sent you some last June, but was too much engaged to attend to it. I have since examined every book on insects in the state library, and several others, for a plate or description of this insect, without being able to find any.

On visiting my orchard yesterday, I again found them, as last year, and herewith send you a pair, (male and female.)

When fresh, the face is of a pea green; chest and wings firm, and of a yellow color, or rather brown, or a darker color, so as to make it changeable. The under part of the wings and adjacent parts are deep green, violet, and blue, so as to appear changeable. The length of the largest, half an inch. It leaves holes in the solid dry wood of its own shape, which appear as if made with a small gouge. The bark is destroyed all around the affected part of the tree by undermining and boring of the young, so that the area of their operations increases from year to year, until the tree is destroyed. In the spring we find in these trees a flat worm, one and a half inches in length, which we suppose is another state of this insect. I have been thus particular in describing it, so that those who see the description and the insect cannot mistake it. I wish to know the name and its other stages, and the remedies against it.

Yours, respectfully,

S. A. Barker.

McConnellsville, O., June, 1846.

Remarks.— The pair of beetles came safely to hand with the foregoing communication, and we have since had an opportunity of inspecting a number of their bugships alive and running on the trunks of apple trees in Dr. Barker's orchard, at McConnelsville, where the mischief they have done is quite considerable.

Annexed is a representation of this insect natural size. We have never seen this particular species before, but from their close resemblance to others with which we are familiar, and from descriptions in the books, we are convinced it is a species of Buprestis, a pretty numerous genus of beetles the larvæ of which are all borers or wood-eaters. A comprehensive account of them is given by Dr. Harris in his trea-

tise on insects, and also in the New England Farmer of 1839. Most of the species of Buprestis are inhabitants of forest trees, as the pine, the oak, hickory &c., and the larvæ of some are so large that the holes which they have in the timber are half-an-inch or more in diameter. The

beetles of the larger kinds are from three fourths to an inch in length. Annexed is a good representation of one of the forest tree species.

In our paper of Jan. 1st, current volume we gave cuts and description of a borer in apple trees, by Robert Seevers of Coshocton co. These were found in the roots of the trees, and were of a larger size than the larvæ in Dr. Barkers' trees. From their form, character and general resemblance however we have no doubt they belong to the same genus. The annexed cut is a representation of the worm as found in Mr Seevers trees.

We have only room for an extract or two from Dr. Harris'.

'The Buprestians are hard-shelled beetles, often brilliantly colored, of an elliptical or oblong oval form, obtuse before, tapering behind, and broader than thick, so that, when cut in two transversely, the section is oval. The head is sunk to the eyes in the forepart of the thorax; and the antennæ are rather short, and notched on one side like the teeth of a saw. The thorax is broadest behind, and usually fits very closely to the shoulders of the wing-covers. The legs are rather short, and the feet are formed for standing firmly, rather than for rapid motion; the soles being composed of four rather wide joints. covered with little spongy cushions beneath, and terminated by a fifth joint, which is armed with two claws.

These beetles are frequently seen on the trunks and limbs of trees basking in the sun. They walk slowly, and, at the approach of danger, fold up their legs and antennæ and fall to the ground. Being furnished with ample wings, their flight is swift and attended with a whizzing noise. They keep concealed in the night, and are in motion only during the day.

The larvæ are wood-eaters or borers. Our forests and orchards are more or less subject to their attacks, especially after the trees have passed their prime. The transformations of these insects take place in the trunks and limbs of trees.

These grubs are found under the bark and in the solid wood of trees, and sometimes in great numbers. They frequently rest with the body bent sidewise, so that the head and tail approach each other. This posture those found under bark usually assume. They appear to pass several years in the larva state.

The solid trunks and limbs of sound and vigorous trees are often bored through in various directions by these insects, which, during a long-continued life, derive their only nourishment from the woody fragments they devour. Pines and firs seem particularly subject to their attacks, but other forest-trees do not escape, and even fruit-trees are frequently injured by these borers. The means to be used for destroying them are similar to those employed against other borers, and will be explained in a subsequent part of this essay. It may not be amiss, however, here to remark, that wood-peckers are much more successful in discovering the retreats of these borers, and in dragging out the defenceless culprits from their burrows, than the most skilful gardener or nurseryman.

The concealed situation of the grubs of these beetles, in the trunks and limbs of trees, renders it very difficult to discover and dislodge them. When trees are found to be very much invested by them, and are going to decay in consequence of the ravages of these borers, it will be better to cut them down, and burn them immediately, rather than to suffer them to stand until the borers have completed their transformations and made their escape.'

OHIO CULTIVATOR.

COLUMBUS, OHIO, JULY 15, 1846.

To Correspondents and Readers.

Several communications and inquiries, received during our late absence, are unavoidably deferred — they shall appear in our next.

☞ Our readers will be pleased to find in this paper a communication from their old friend T. Affleck, Esq., formerly editor of the Farmer and Gardner, at Cincinnati.

☞ Don't fail to read the address of I. Dille, in this number.

Death of 'Sampson.' — We regret to learn that friend Eaton's imported English draft horse 'Sampson,' died at Circleville about two weeks since — supposed to have been *poisoned*.

The Great Sale of Fine Cattle, at Chillicothe, on the 29th inst., must not be forgotten. Such opportunities for procuring really choice stock, do not often occur.

The Weather, for the past ten days, has been remarkably warm — we should say hot; and, with the occasional showers, the corn crop is pushing ahead wonderfully. — (We saw stalks in Lawrence county, last week, that we judged to be fifteen feet in height.) Potatoes, also, and other late crops, are growing very rapidly.

The Wheat harvest, in this region, and all south of here, is mostly over, and the grain secured in good order. Some of it was injured by rust, but the crop, as a whole, is a splendid one. We see by the papers that much injury has been done to the wheat crop in some parts of New York, Pennsylvania, New Jersey, &c., by the late heavy rains.

Notices of Publications.

The American Herd Book.—Containing Pedigrees of *Short Horn Cattle*, to which is prefixed a concise history of English and American Short Horns, compiled from the best authorities, — By Lewis F. Allen; Buffalo, Jewett, Thomas & Co., 1846.

This important work arrived during our recent absence, and we have not had time to examine it fully. We have seen enough, however, to convince us that the talented author has well performed the arduous task, which all who are familiar with the subject, know it must have required to produce any thing like system and order out of the confused materials which existed in this country for the work.

After a spirited introduction, and the history of Short Horns, the volume gives the pedigrees of about 200 bulls and 400 cows, with the names of their owners or breeders, about 170 in number.

The arrangement of the work is admirable, and the 'getting up' is highly creditable to all concerned. I forms a handsome large volume—price $3 00. We trust no owner or lover of beautiful cattle will consent to be long without it. A few copies are for sale at this office; also by Wm. H. Moore & Co., Cincinnati.

Colman's European Agriculture, part vi is received, and is more thoroughly practical than any part that has preceded it. It is devoted, too, to subjects respecting which there is a great lack of knowledge among the farmers of this country. The chapters are entitled as follows: 'Paring and burning;' 'burning land;' 'admixture of soils;' 'warping;' 'an experiment;' 'straightening a river;' 'work in Ireland;' 'drainage;' 'the drainage of farms;' 'national characteristics;' 'tile and pipe draining.'

American Journal of Science and Arts, for July.—This number, like its predecessors, contains a number of articles of great value. We do not see how any man, desirous of keeping pace with the rapid march of scientific discoveries, can willingly dispense with this work.

Charter, Constitution, and Bylaws of the Cincinnati Horticultural Society, with a report of its transactions for 1843-'44-'45, list of members, &c. This is a large and beautiful pamphlet, and contains much information of practical value to horticulturists.

An Address, delivered before the Queens county (L. I.) Agricultural Society, by John S. Skinner. Good, of course—could'nt be any thing else.

LADIES' DEPARTMENT.

Give us Good Bread!

We are sorry to have any occasion to point out the errors or failings of the ladies, but we assure them that, in doing so, we are influenced solely by a desire to promote their own welfare, and the health and enjoyment of their families and friends. Permit us, then, to remark, in the outset, that we have never, in all our life, seen so much *wretched cookery* as in our travels among the farmers of Ohio, and no one thing so generally defective as that important article, Bread. We do not say that Ohio farmers' wives are all poor cooks, or even a majority of them, but we do say, that there are far too many of this character; and of those who deserve all praise in other respects, very few know how to make really *good bread*. We trust, therefore, that we shall be pardoned, if we devote some space to this subject, until a reform is begun among our readers. We do not, of course, profess to be able, from our own knowledge, to give particular instruction in these matters, but we will endeavor to draw on the experience of those who are well qualified to instruct. And first we will offer a bit of advice, written by some sensible person who is unknown to us, on the subject of

Ripe Bread.

Bread made of wheat flour, when taken out of the oven, is unprepared for the stomach. It should go through a change, or ripen, before it is eaten. Young persons, or persons in the enjoyment of vigorous health, may eat bread immediately after being baked, without any sensible injury from it; but weakly and aged persons cannot, and none can eat such, without doing harm to the digestive organs. Bread, after being baked, goes through a change similar to the change in newly brewed beer, or newly churned buttermilk, neither being healthy until after the change. During the change in bread, it sends off a large portion of *carbon*, or unhealthy gas, and imbibes a large portion of *oxygen*, or healthy gas. Bread has, according to the computation of physicians, one fifth more nutriment in it when ripe, than it has when just out of the oven. It not only has more nutriment, but imparts a much greater degree of cheerfulness. He that eats old ripe bread, will have a much greater flow of animal spirits than he would were he to eat unripe bread. Bread, as before observed, discharges carbon and imbibes oxygen. One thing, in connection with this thought, should be particularly noticed by all housewives. It is, to let the bread ripen where it can inhale the oxygen in a pure state. Bread will alwas taste of the air that surrounds it while ripening; hence it should ripen where the air is pure. It should never ripen in a cellar, nor in a close cupboard, nor in a bedroom. The noxious vapors of a cellar, or a cupboard, never should enter into and form a part of the bread we eat. Bread should be *light, well baked, and properly ripened*, before it should be eaten.

Bread that is several days old, may be renewed, so as to have all the freshness and lightness of new bread, by simply putting it into a common steamer over a fire, and steaming it half or three quarters of an hour. The vessel under the steamer, containing the water, should not be more than half full; otherwise, the water may boil up into the steamer and wet the bread. After the bread is thus steamed, it should be taken out of the steamer, and wrapped loosely in a cloth, to dry and cool, and remain so a short time, when it will be ready to be cut and used. It will then be like cold new bread.

Flowers, Love, and Peaches!—The editor of the Western Reserve Magazine, whose marriage we announced last spring, thus closes an article on Flowers, in a recent number of his paper:

'How strong do they tell of the enduring love, the worth, and purity of woman. In their freshness and beauty, they give to our minds cheerfulness, and in their decay, remind us that 'life is too short' to be entirely passed in the amassing of lucre, which bestows upon us no lasting benefit. What charm is given to the dwelling of man by the surrounding of it with beautiful flowers! It needs but the presiding genius of lovely woman to give it attractions over every thing else.'

That last sentence speaks volumes for you, brother E.! — and appropos of oysters, guess we'll call and take a few of those fine peaches next month!

Hardship is the natural soil of manhood and self-reliance.

Mr Sawyiers' Guadeloup Merinoes.

Engagements in other parts of the state prevented our visiting "Milewood farm" during sheep shearing as we had contemplated, to view the fleeces of Mr Sawyiers' flock of Guadeloup Merinoes, the importation of which to this state was noticed in our paper of Feb. 15th. We therefore take pleasure in publishing the following letter from Mr Sawyier, and we invite our sheep farming readers who may be passing through that portion of the state, to call and examine this flock for themselves. The farm is near Lafayette, Madison co., on the National Road, about 22 miles west of Columbus.— Ed.

(LETTER FROM MR SAWYIER.)

Cincinnati, July 4, 1846.

Mr Bateham — I have just returned from the shearing of my flock of Guadeloup Merinoes, at Milewood Farm, and was sorry that you could not have made us a call, for I think you would have been pleased on a close examination of my sheep and their fleeces. They fully answer my most sanguine expectations in their vigor of constitution, beauty and compactness of form, and in the closeness, fineness and weight of fleeces; the wool covering their whole bodies excepting a small part of the face and the hoof, and the coating so uniform, producing a fleece remarkably soft, white and free from yolk.

Remember that these sheep were started from New England on the 1st of Sept. last, and driven on foot nearly 1000 miles; they had no shelter during the last very severe winter, and only common keeping; they endured the winter better than sheep raised in this climate, and their fleeces in some cases reached as high as *nine* pounds of washed wool. Prince Albert, a buck of his second shearing cut 9 lbs: a year old sale buck, called Pokanokett, cut 7¾ lbs. I think with the shelter and better keeping which I mean to provide, Prince Albert will next year yield 10 lbs. His sire (King Phillip) cut last year 10¾ lbs—well washed. Pokanokett is of the same stock. I have at Milewood 600 lambs from those imported bucks, forming as beautiful a flock as I ever saw, and should you or your friends be passing that way, my farm agent will be happy to show them.

Very Respectfully &c.

Nathaniel Sawyier.

Letter from Thomas Affleck.

SWEENY IN HORSES — CROPS AT THE SOUTH, &c.

Washington Miss., June 19, 1846.

M. B. Bateham, Esq:— *Dear Sir:* I am glad to see that you make such headway with the "Cultivator," and hope that your list of subscribers increases with the improvement of the paper.

You remark in No. 11, Vol. 2, that you can find nothing relating to a disease occasionally affecting horses, called *sweeny*. You will find a correct descriptive account of this disease, and excellent directions for its treatment, at page 252 of vol. 4 of West. Farmer and Gard., taken from the Southern Cultivator. You will also find it treated of in the old volumes of the American Farmer, and in the Kentucky Farmer, I think.

I have had the disease to deal with once or twice and have cured by rowelling and bathing with hot spirits of Turpentine. It rarely affects horses on a farm or plantation: those traveling on macadamized, frozen, or other hard roads are very apt to have it.

Mr J. A. Hamilton, an overseer now in my employment, and a man of observation and experience, assures me that he has again and again cured the swinny or sweeny by the following simple means. He collects, say, a quart of common red earth worms; puts them in a pot with just water enough to keep them from scorching; and let them simmer over the fire until they melt down, into a kind of oil, which they will do, leaving scarcely any residue. It is then bottled for use. With this he anoints the diseased shoulder frequently, rubbing it well in. A few such applications has always effected a perfect cure.

Fortunately, I have had no opportunity of trying this; but have every confidence in Mr H.'s statement. At all events, it is simple and cheap. The only objection is the cruelty to the poor worm; though by using boiling water, their sufferings would be but short, and not so great as the oyster undergoes, one would think, when swallowed from the shell!

Talking of horses—let me advise those who bring that kind of stock south for sale, to bring some good, stout, square-built *breed horses*. They are annually becoming more and more in request, and if young and likely, command good prices. Almost every planter in this region of country, is determined upon raising his own horses and mules. We have now several fine jacks and stallions, and more are wanted. I am resolved upon working at least one-third horses, the balance mules. The mares will be able to do the ginning and hauling to market, and perhaps assist in the early spring plowing, at the same time raising a colt — the mules will do the summers' tending. Many of my neighbors have come to the same determination, which will create quite a demand for horses in Natchez this fall and winter.

We are blessed and favored, this season, in our grain crops. Remarkably heavy crops of winter oats; rye and wheat, have just been harvested; corn never looked finer, it is now in full silk, and we have fine showery weather — just what it needs, and exactly what is wanted to give the peas amongst the corn a good start. Cotton, though very backward and at least three weeks later than usual, looks healthy and well, and is now growing vigorously. But it is an uncertain crop, one can make no calculation until it is in the bale.

Yours truly,

Thos. Affleck.

From the Lowell (Mass.) Journal.

Important Meeting of Wool Growers.

At a meeting of Wool-growers, holden at the office of the Middlesex Company in Lowell Mass., on the first day of July, 1846, representatives from the eight following States being present, viz: Massachusetts, New Hampshire, Vermont, Connecticut, New York, Pennsylvania, Virginia and Ohio, Samuel Lawrence, Esq., of Massachusetts, was called to the chair, and G. Dana, of Ohio, appointed Secretary. After opening the meeting, an important and very interesting discussion took place on the relative properties of the Saxon and Merino sheep, and more especially of their fleeces, in which Mr. Brown, (of the firm of Perkins & Brown of Akron, Ohio,) as advocate for the excellence of the Saxon breed, and Mr Jacob N. Blakeslee, of Connecticut, advocate for the excellence of the Merino breed, largely and most interestingly participated. The gentlemen, after various propositions, with the aid and approbation of the meeting, came to, and agreed upon the following manner of testing, and as far as could be done, settling the question of the relative value of these two important breeds of sheep.

Perkins & Brown, in the presence of Guy Walcutt, of Summit County, Ohio, are to select forty lambs, which said Walcott is to see shorn, and is to certify that they were of the flock and bred by said Perkins & Brown, and that they were shorn at or about one year of age, and at the clip of 1847. The said Blakeslee, is to select a like number from his flock, which are to be shorn at the same age, in presence of N. B. Smith, of Connecticut, at the clip of 1847, who is to make a like certificate as the one above described — which certificates are to accompany the wool of the said lambs to the Middlesex Company, and to be placed in the hands of Samuel Lawrence, Esq., who is to be the umpire to decide upon the merits of the two lots — and it is understood that the wool is to be stapled and scoured, and the value of each fleece placed against it — and to give to the gentlemen competitors and the world, his decision and his views at large on the comparative excellency of the two kinds of sheep and their fleeces; and the wool-growers throughout the United States are respectfully and earnestly invited to participate in this competition, the results of which are deemed important to the wool interest, and to shear at the clip of 1847, a like number of lambs, (and if there be any variation from one year in the age, have the certificate state that variation particularly) and to obtain the proper and well-authenticated certificates, and send them with the clip to the above named umpire, who will report the whole, and award the meed of honor to whom it may be due, and make the report public.

It was unanimously voted that this report be signed by the Chairman and Secretary, and that the papers friendly to the wool interest throughout the country, be requested to copy.

SAMUEL LAWRENCE, Ch'n.

George Dana, Sec'y.

An Address,

Delivered before the Madison Township Farmers' Club, June 6th, 1846. By Israel Dille Esq., *of Newark, O. Published by request of the Club.*

Mr President: It is a peculiarity of the age, that men unite in associations for the purpose of advancing a common interest or pursuit. Societies for the promotion of every art and every department of science, are organized in every enlightened nation. Great Britain has so far taken the lead in these measures, that distinguished men throughout the world and in any nation, esteem membership in one of her associations, as a distinguishing honor. By means of these institutions, not only the amount of human knowledge has been increased and opinions corrected, but the useful arts, the arts which tend to promote the comfort and the wealth of individuals and communities, have been greatly advanced. To the British Association for the Advancement of Science, the world is indebted for the profound and invaluable works of Dr Liebig on Organic Chemistry. That volume applied to agriculture should be in the hands of every farmer; and as it has been published in this country in a very cheap form, it is beyond the reach of no one.

The author says: 'The cultivation of the earth is the economy of force. Science teaches us the simplest means of obtaining the greatest effect with the smallest expenditure of power, and with given means to produce a maximum of force. — The unprofitable exertion of power, the waste of force in agriculture, in other branches of industry, or in social economy, is characteristic of the savage state or the want of mental cultivation.'

This is the great desideratum of every farmer. To obtain the largest crop in the smallest space, and with the least expense of labor or force, or the most strength for his working cattle, or the most fat in his stock designed for the butcher, with the least feed. This whole matter resolves itself into two simple questions;

1st. What is the most proper nutriment for plants or animals? and

2d. How should it be applied?

The nutriment of plants consists of whatever they require in the development of their most perfect condition. When a soil is deficient in some element necessary for any required crop, the deficiency must be supplied artificially, by manuring; without it, the crop would fail, and no labor or art could be available. But as the farmer cannot always determine what element of his soil is deficient, and no chemist is convenient to solve that query for him, and as manuring in various modes is an important part of his labor, it only behooves him to know what is an important necessary ingredient in the particular vegetation he proposes to cultivate, to insure his success. This knowledge he will acquire by an attentive study of those excellent books on agricultural chemistry which are now widely disseminated throughout the country, and can be purchased so cheaply, or by reading the valuable agricultural papers of the day.

It is true, the farmer will find in these books many things that, on a first perusal, may be unintelligible to him. The advantage of these associations will do much to elucidate whatever is obscure or dark to his understanding, and in a short time the acquaintance with nature and nature's laws, in obedience to which he must labor, if he would succeed, will remove all his doubts, and give him a clear and enlightened view of the subject.

I trust I need not labor here to dissipate the prejudice against book farming, as it used to be called. If that prejudice still belongs to the age,

I take for granted that it does not belong to this club.

It is only necessary to mention a single fact, to illustrate the certainty of chemical science and its conclusions. A French chemist, by analysis, had discovered the elements and their proportions or equivalents of the oil of wintergreen. By compounding those elements, brought from other sources, he was enabled to produce that oil, in all its qualties and perfections.

Other organic substances, and especially those more important for the nutriment of animals have been submitted to more frequent and careful chemical analysis, so that their constituent parts are now well and thoroughly understood, and may be known to all who will take the trouble to read the results of chemical investigations.

Take an average of your soil to a good chemist, and in a short time he will be able to advise you whether it will be suitable for the production of a grain crop, though he may never have cultivated a plant in his life. The inquiry will first be, what elements naturally and properly enter into or favor the production of the proposed crop, and then, whether those elements are contained in the soil. Here, then, is a matter of certainty, upon which the farmer can rely. But the chemist is not convenient for consultation. What, then, shall be done?

The ordinary experience of the intelligent farmer, in some measure suffices. Though he may be unable to give a scientific reason for the success of a particular process, or determine from analysis the capacity of a given soil, he may give a practical reason for the one, and come to a probable conclusion as to the other. But with the aid derivable from the labors of the chemist, he may, with reasonable certainty, improve or supply a deficiency of the soil for any proposed crop, in the application of his manures.

First, the chemist teaches him the elements of any given agricultural production, wheat, for instance. He knows, of course, that his soil must contain all the solid elements of that plant, or his labors will result in a failure. To this end, he must understand the composition of every part of the plant, or rather his soil must contain all those elements; for the stalk — the straw — is as necessary to the crop as the grain or seed. The soil may abound in all the elements of the grain, but, wanting those which enter into and compose the straw or the root, it will, to all intents and purposes, so far as that crop is concerned, be barren. Like all other plants of the grass family, the straw requires silica, or the pure matter of flint. This is soluble in water, and in that condition is probably conveyed into the plant, and converted into the vegetable fibre. But in vegetable combinations, it is always united with a portion of potash, which chemists call a silicate of potash. Without these mineral elements, the straw could not be formed. It also contains other elements in still greater proportion. Carbon is common to ths whole plant and its production. Carbon is the pure matter of charcoal. Whatever will make charcoal, contains this element. Now, there are few situations so barren as not to contain, either in the soil or in the air, both silica and carbon. Silica is an earth, and is seldom or never found in gaseous states, whilst carbon is found both in solid and gaseous combinations. The air is seldom so pure as to be destitute of carbonic acid, and many minerals, especially lime, have a large portion of carbon in their composition. Phosphorous is another element that is found in nearly all seeds, and so far as we know, without it their production would be impossible. It exists in nearly all vegetable matter, and in the excrement of animals. Ammonia, too, is necessary, not only as an ingredient, but as a stimulent to vegetable matter.

Thus we see that whatever contains these elements are applicable as manures, because they contain the food or nutrition of plants. Some of these manures are of mineral, others of vegetable character. Some are heavier, others lighter than the surface soil. Careless husbandry is very liable to exhaust a soil, by allowing one to descend too deep for its ordinary culture or plowing, or the other by suffering it to escape as a gas.— Deep plowing brings up the heavier and buries the lighter, and is frequently of itself the best manuring that can be applied to land.

Of those articles which are valuable as manures, the flesh and excrement of animals, bones, lime, hair, horn shavings, and decomposing vegetable matter, charcoal, and wood ashes, are the most prominent. A compost in which all or several of these ingredients are mixed together and decomposed under a light covering of earth, is exceedingly nutritious. The value of composting consists in the greater saving of the enriching material; for the earth which covers the heap by recovering the gases which escape, is equally as rich as any part of the manure proper. Hence it follows that all vegetable or rapidly decomposing manures, should be turned or plowed under immediately after placing it upon the field; otherwise, its gases, which contain its principal value, being composed in a great measure of carbonic acid, escape in the air, or that part of it which is not decomposed dries under the action of the sun, and contributes little or nothing for sometime at least, to support vegetation.

You will observe that I have incidentally touched upon the application of manures, under the first question. Under the second, I merely design to notice, briefly, that the nutrition or food of plants is conveyed to them in a fluid form. A large portion, and very likely far the largest, is conveyed to them in water, and derivable from the earth. The roots possess the proper organs for receiving their food, yet air and light are absolutely necessary for their growth and prosperity. — Without moisture at the roots, no useful plant can long survive. It is necessary for the dissolving of mineral and decomposing of vegetable manures. Hence a judicious system of culture provides against both wet weather and drought, and almost by the same process. If a stiff clay or other impervious earths forms the subsoil, crops are disposed to sicken and lose color and vigor in extremely wet seasons. Deep, or what is better, subsoil plowing, which loosens the earth some depth, permits the excess of water to descend and leave the surface in a drier and better condition. In case the season be too dry, the same process is useful, for it permits the roots of plants to descend and seek that moisture below, which cannot be found at the surface. In all plants which admit of after culture, as corn, potatoes, &c., frequent plowing or stirring the earth, in times of drought, is highly beneficial; for the reason that the air always contains a large portion of water, in the form of vapor suspended in it. This can easily be proved by taking a glass of cold water and setting it in a current of air. Soon you will discover that large drops of water settle and form on the outside of the glass. This is commonly termed '*the sweating of the glass.*' Now, these drops are deposited from the passing air, because cold air is not capable of holding in suspension so much water or vapor as warm air. Such is the simple arrangement of Providence to produce rain. A cloud passes from a warmer to a colder medium of air, which cannot sustain so much water, and it consequently falls in the form of showers. Hence you see the importance of keeping the earth loose around the roots of your plants, in dry seasons, that the air thus charged with water may enter and impart some of its moisture to the roots. Especially towards the morning, when the ground is cooler, the air imparts a larger portion of moisture, which is taken up by and sustains the plant.

This, you will observe, is an important consideration in the application of manure. Water is the vehicle by which the food of plants is conveyed into those parts where it is necessary for their sustenance and growth. Withhold it, the plant dies; give it in excess, it dilutes its food too much, and it languishes.

Under the head of the application of manure, I may mention the value of green crops plowed under. They contain all the elements of vegetation already elaborated, and being turned under in a green state, rapidly rot or decompose, and become food for the succeeding crop at once. This matter is generally understood by our farmers, but its practice is usually confined to clover. Other green crops may be equally well applied, which require less time in their production and maturity, and attended with less expense. Buckwheat, turnips, and even weeds, will be found greatly to improve the soil, if properly plowed in and well covered with earth. In fact, a soil exhausted, ornaturally nearly barren, may be revived or created by turning in growing vegetation of any kind. All plants in their growth derive a portion of their substance from the air as well as from the earth; consequently, whatever they derive from the air, when properly buried by the plow under the earth, is added to the soil.

The subject of nutrition, both as regards vegetables and animals, is an important study for the economical farmer. For animals, some food is more conducive to strength of muscles, others to the production of fat. Corn and other similar grains are better adapted to the latter purpose — oats for the former. Horses will be capable of doing far more service upon oats than upon corn. The qualities and adaptation of the various kinds of food for domestic stock, should be carefully learned and followed by the farmer.

These are subjects which have engaged the attention of the scientific, and the result of their most careful investigations and experiments, are made known to the public in the cheapest and most accessible form. The forthcoming work of the learned Liebeg, we may well anticipate, from his previous labors, to be one of the most valuable, upon this subject, that has ever appeared.

In closing these rambling observations, I will remark, that one of the greatest errors of het Ohio farmer, is that he cultivates, generally speaking, more land than he can cultivate well. There is not only the loss in the interest of his money invested in land, but the want of proper economy in the force employed in its cultivation. Let us take two farms of equal means every way. One invests $3000 in the purchase of 500 acres of land for his farm, that is, $6 per acre. This employs nearly all his capital. To improve his land, so as to be able to till it, either involves him in debt, or is the process which his limited means can accomplish. After years of hard struggling, he succeeds in opening 300 acres to cultivate. — He makes large calculations, crops extensive, but there is so much to do that nothing can be well done. An extra number of cattle for the plow is employed, and to put in a large crop, all is hurry and bustle throughout the season of sowing and planting. The fields are not manured, because he wants time to carry it out; the soil is imperfectly plowed, and the work of sowing and planting is badly performed, or unseasonably done. Summer crops are neglected, for he has more to do than he has force to execute. Now the result: His average of wheat is less than 10 bushels to the acre, of corn 30, and other crops in proportion. His farm, too, is becoming stocked with weeds and exhausted from unskilful husbandry. His large farm yields him but a small surplus, and if he hires his labor, it is all exhausted in paying his hirelings. At the end of the year, when he balances his accounts, how much does he find in his favor? The other has invested $600 in 100 acres. He improves it all well, and provides all the necessary buildings and means of keeping his stock and farming well. Every thing is done within himself. Careful tillage, judicious rotation of crops, timely manuring, and general economy in all his operations, crown his labors with success. He is able to make his wheat average 30 bushels to the acre, corn 100, and his domestic animals well fed and protected from inclement weather, are always ready for use or for market. His 10 acres of wheat is 300 bushels, and his 10 acres of corn 1000. At the year's end, his balance sheet shows a handsome surplus in his favor. That man is successful — he is the most independent among men. He has money to lend; he is rich; he is, indeed, the true farmer.

Mr President, I thank you for the honor you have conferred upon me this day, in requesting me to address your club. Let me urge you to persevere in your laudable exertions to advance your common interest by united efforts, and to promote that kind and goodly feeling and diffusion of useful practical knowledge, as neighbors and friends, which a liberal and intelligent social intercourse may so happily produce.

Green Crops as Manure.

Can land be improved merely by plowing in the crops which grow in it?

Suppose land to be in clover: which will most improve the soil, or conduce to the product of the succeeding crops, plowing in the entire growth of clover, or feeding it off with stock?

At what stage should a green crop be plowed in to obtain from it the greatest benefit?

Some have doubted whether land can be improved by its products alone. The idea with those who entertain this doubt, seems to be that every ingredient of the vegetable structure comes originally from the soil, and that hence no principle of fertility can be added to a given extent of soil simply by the decay of vegetation which it has produced. Without attempting to argue this point in detail, it is sufficient, perhaps, to advert to the well-known fact, that the fertility of forest lands increase as long as the growth of wood continues.

It is related that Van Helmont planted a stalk of willow in a box containing a quantity of earth. He carefully dried and weighed the earth before planting the twig. He watered it with distilled water only. After several years, he took out the willow, which had attained an increased weight of many pounds, dried the earth as before, weighed it, and ascertained that it had lost only an ounce or two of its original weight.*

The fact that vegetables do derive a part of their substance from the atmosphere, admits, at least, of no *reasonable* doubt; but certain kinds of plants are believed to draw their food from the atmosphere in greater proportion than others. It seems reasonable to believe that those substances which have once formed plants, are capable, by decomposition, of contributing to the growth of other plants whose nature and composition are more or less similar.

It has been ascertained that carbon enters largely into the structure of plants; it is, indeed, next to water, the chief element of their composition.† It is taken up in the form of carbonic acid, both through the leaves and the roots.—Those plants which take the largest proportion of their food from the air through the leaves, are the broad leaved kinds. By cultivating those of this description, and depositing their substance in the soil, we can increase the elements of fertility, that is, we can draw from the air and concentrate in the soil, matter which will supply food to other plants.

So much for our first question. In regard to the second, we incline to the opinion, from evidence derived from experience and observation, and considerable inquiry, that it is better to feed off clover than to plow it in. We believe that the best crops are obtained where the clover is depastured. This subject has been brought up for discussion at several of our agricultural meetings, and the opinion expressed by nearly all farmers who have had practical acquaintance with it, was in agreement with our own. Col. Cost, member of Assembly from Ontario, and an extensive and judicious farmer, stated that he had practised plowing in clover, and had observed the results thus produced compared with those where it had been fed off, and he gave a decided preference to the latter course. The experience of Gen. Harmon, of Wheatland, well known as one of our most successful wheat farmers, has also, we are authorized to say, induced him to form the same opinion. He has noticed that his wheat crop is always better where clover has been depastured.

We are not aware of many experiments having been made expressly for the purpose of testing this point, though its importance is such as to render the most careful experiments necessary, and we would suggest this to agricultural societies as one of the subjects to which their attention should be directed.

We recollect having read an account of an experiment made by the late Gen. Harrison, of Ohio. He had a field of clover consisting of several acres — the soil of clayey loam, and of uniform character. He divided it into two parts, one of which was pastured, chiefly with cattle, and on the other the growth of clover was plowed in. In the autumn, the pastured portion was plowed, and both parcels were sown to wheat.—The wheat was best on the part which had been pastured, as were also the two succeeding crops, consisting, if we mistake not, of oats and clover.

Various causes are assigned for the effects above mentioned.

1. It is said that, by burying in the soil a mass of vegetation while it is filled with sap and juices, a *sourness* is produced which is hurtful to succeeding crops.

2. In some instances where a considerable quantity of clover has been plowed in, its effect is thought to have been to make the soil too 'hovery,' or 'puffy,' as it is variously called; that is, it becomes too loose at the bottom of the furrow, and the roots of the wheat do not obtain a sufficiently firm hold.

That sourness is actually caused by the fermentation of a large mass of green clover or other vegetation, does not seem improbable. The sap contained in the stalks and leaves may be forced by fermentation into acetic acid, and the sugar and starch be turned to vinegar. Every one may have noticed, that a pile of green weeds or green grass, becomes, after a time, actually *sour*. The acid may be perceived both by smell and taste, and we are unable to see why the same effect should not take place when a heavy crop of clover is turned in with the plow. At all events, the effects of the practice are such that many farmers declare they would prefer having the clover cut and carried off the land, rather than it should be turned in green.

Mr Vedder, of Geneva, informs us that he formerly plowed in clover, but that he has latterly discontinued the practice. He is of opinion that the chief value is the root of the plant, and he states that he has obtained better crops where the clover has been cut and the stubbles only plowed in, than by plowing in the green tops. Gen. Harrison, also, in explaining the results of the experiment above mentioned, suggests that the principal amelioration of the soil is by the roots. They may produce a favorable effect in several ways. Where the soil is too compact, they make it more friable, by dividing and opening it, and the decomposition of the roots themselves furnishes a large amount of matter.

We will suggest another mode, also, by which the roots improve the soil. It is known that plants exert a *vital* action on the soil. It is by this principle of vitality that they are able to reduce the various substances of which they are formed, into food on which they can subsist. Inexplicable as is this mysterious power, it must be great; for by its exercise the hardest flints, and the other mineral elements which enter into the vegetable structure, are perfectly dissolved, are taken up and made to perform their several offices in the tissues. Perhaps no plant is more remarkable for this action, than clover. Some idea may be formed of it, by observing the effect produced when its roots are brought in contact with rocks or stones. Under this vital energy, through the agency of light, heat, air, and moisture, the solid rock is made to crumble, and gradually to wear away. Now, may not this action of the roots tend to bring the earthy matters composing the soil into a state more favorable to the support of other plants? May not the mineral elements be thus rendered more easily soluble and avilable to other crops?

It may be said that the sourness before spoken of, can be avoided by allowing the clover crop to ripen and die before it is plowed in. This is probably true, and it has been tried in some cases, but still preference has been given to the practice of feeding off the crop. The fact upon the whole seems probable, that there are certain substances, as nitrogenized salts, &c., conveyed to the soil in the dung and urine of animals, whose action is more favorable to fertility than the crude, undigested vegetable matter.

But to speak more particularly in regard to the third question proposed for consideration. We have no doubt that land may be improved by clover unaided by stock. We have shown that a portion of the organic matter of which the plant is composed, may be drawn from the air. This matter, which ultimately becomes *humus* or vegetable mould, is, to a certain extent at least, essential to the fertility of soils. Prof. Johnston states that rich soils usually contain five per centum or more, of their weight of organic matter. To secure the full benefit of this, we should adopt that mode of management which will admit of the accumulation of the largest quantity, and apply it at the time and in the manner which will produce the most favorable operation. Now, by allowing the crop to become fully grown, we shall, of course, obtain the most, and by allowing it to become partially ripe and dry, we shall avoid the objections resulting from acetic fermentation.—This, therefore, is the state in which we think the greatest advantage would be derived from plowing in a crop of clover.—*Alb. Cult.*

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* The writer is unable to refer particularly to this experiment, but is confident that the facts are stated in general terms.

† The substance of plants chiefly consist of woody fibre, starch, and gluten. Woody fibre and starch, and also gum and sugar, consist of carbon and water only.—Thirty-six pounds of carbon and thirty-six pounds of water, form seventy-two pounds of woody fibre. Thirty-six pounds of carbon and forty-five pounds of water, form eighty-one pounds of dry starch or gum. Thirty-six pounds of carbon and forty-nine and a half pounds of water, form eighty-five and a half pounds of loaf sugar, or sugar candy; and thirty-six pounds of carbon and twenty-seven pounds of water, form sixty-three pounds of humic acid.—*Johnston.*

From the Report of the Commissioner of Patents.

Future Agricultural Improvement.

There are some things which seem to authorize our augury of still greater advances in agricultural improvement. And in touching on these, we shall, at the same time, suggest the points of deficiency which still remain to be supplied.

The first ground of encouragement on which we rely, then, is, *increasing agricultural knowledge*. To any one who will take the pains to examine the list of agricultural periodicals, and compare it with that which would comprehend all the weekly or monthly journals of this description a few years since, the contrast will appear striking. Nor is it only in the number of these, and the wider extent of publication and circulation which is enjoyed by them, that this difference is manifest. They are not merely printed in more sections of our county, but they are much superior in their appearance and their contents, to say nothing of the beautiful and highly finished illustrations which make a part of them. Instead of being confined to results at home, they are filled with letters from able correspondents abroad, as well as condensed views and extracts from foreign works of high reputation. We have thought it might not be an uninteresting addition to our appendix to subjoin a list of our agricultural periodicals, and such will accordingly be found in appendix No. 36. These weeklies and monthlies having more or less extended circulation, exert a very important influence on the public mind, and thus a direction has been given to the public feeling. The effect of this, and the impulse which has been given, are seen in the various channels which are every where open to meet the craving for greater supply. The editors of many of our public journals have discovered that mere political intelligence, or scraps of literary intelligence and wit, are not all that are demanded from them by the yeomanry of our country. There must be an agricultural department, or a column, at least, devoted to agriculture, to secure the patronage of the farmer subscriber; and, accordingly, there are not a few of our political journals which weekly furnish articles, selected or original, on subjects connected with this great branch of American industry.

Another means of diffusing such knowledge, is the publication of volumes of standard merit relating to agriculture. We think it truly an auspicious era in our country, when such works as Thaer's, Liebig's, Johnson's, Mulder's, Petzholdt's, Youatt's, Dana's, and many more, too long a list to name here, are brought within the reach of our agriculturists. If they do not at once give up former views, and adopt those which accord both with science and experiment, yet we can hardly doubt that in many cases these will exert a modifying influence on their practice. Gradually they may be led to feel the importance of such things, and another generation, if not the present, will be found to be imbued with correct principles of agricultural science.

The brilliant success which has attended recent demonstrations on the part of the well-trained and thoroughly disciplined minds who led the way in the reformation of agricultural chemistry, and vegetable and animal physiology, in their application to practical use, has prompted new aspirants to fit themselves thoroughly to share in the nicer discriminations and new discoveries yet to be made.

We hail it as a cheering promise in this respect, that there are minds of enlarged views and accurate investigation abroad among us, and operating on the most intelligent of our agricultural population. These authors,

whether of our own or of other countries, are only the precursors of a constantly increasing agricultural literature, which is destined to render more efficient the means at our command for covering our land with smiling fields and waving harvests, so that literally the wilderness may yet 'bud and blossom as the rose.' The increased training of the youthful mind, agriculturally, is also another feature which augurs well for us. We refer here to elementary treatises adapted to the young, to the establishment of agricultural schools, and to the proposed introduction, in a degree, of some of these topics in our common schools. There is much not merely to expand and invigorate, but also to interest the mind, in agriculture, studied in its bearings on various sciences. Chemistry, with its beautiful illustrations of combination or decomposition; geology, with its marvellous and time-worn relics of past ages: entomology, and its curious developments; together with the mysteries of animal economy, vegetable physiology or botany; all are made to open their treasures and present their attractive claims. The young student is brought thus to a world of wonders; and his attention once arrested, he cannot but find that agricultural study, in the broad view which should be taken of its domain, has sufficient to amuse and to discipline the faculties of intellect and heart. Its influence can scarcely fail to be salutary, as it leads him to the great laboratory of nature, and shows him how the operations of Providence keeps at work the means of supply, and that decay is only succeeded by reproduction in some other form of vegetable life. It is scarcely necessary to say, that, with these inspirations of science, he will be the promoter and patron of improvement in every shape, and that he will be foremost in upholding the agricultural club, the county or state association, with its fairs for exhibition of products of industry. These, too, the more they are multiplied, will exert a wider influence. Our countrymen are apt to observe and to invent; but they need more precision and discipline in the development of their operations. As these are acquired by a severe training in science, the results will be seen in a thousand ways. We point to one desirable improvement, which, if it were accomplished, would doubtless exercise no little influence on our agricultural prospects. We refer to the adoption of some such course as is taken in the great agricultural meetings in various countries of Europe, where a week is spent by persons brought from all parts in discussing subjects of agriculture, previously arranged in a printed programme. Some idea of what we mean may be gathered from the perusal of Mr Fleischmann's letter, and also the translation of the regulations relating to the great agricultural meeting at Breslau, last summer. It is true that something of the same kind, on a small scale, has been attempted at Albany, Boston, New York, and other places, during the sitting of the state legislature, or weekly, and we see not why the object might not be attempted and executed successfully on a much larger scale in our own country.

Another ground on which we rest our augury of prospective improvement in this great branch of national industry, is the *application, in new forms of enterprise, of the products of the soil, and of the departments of collateral husbandry.* To take a single instance for illustration: It is but a few years since the improvements were introduced by which such quantities of lard and lard oil are prepared for the market. The business connected with this has already run out into varied channels, and so it must be with every new invention which appropriates the fruits of the farmer's toil. One branch of labor gives rise to yet another. But our career in this respect seems but just begun. The vast increase of inventions, the numerous shapes through which industry is developed, all furnish reason to believe that we have by no means reached the end of our progress. The enlargement of these outlets of skill and enterprise, and the prospect of increased civilization through our commerce abroad, will undoubtedly have a tendency to make our land teem with an industrious population, whose wants will multiply as their wealth shall increase; and thus, through the diversified reciprocities of trade at home and abroad, a more steady and reliable market be created, which shall help to enrich the diligent and reward the efforts of successful economy. It will not be long, as we confidently believe, before an average uniform price at points equidistant from the great marts of commerce will be established throughout our land by means of telegraphic communication, and the facilities of conveyance be so multiplied as to check the inequalities induced by speculation, and give assurance that they who provide by the sweat of their brow for an extending empire of freedom, shall not labor in vain. If affluence may not be the lot of all, yet steady prices, on which they may count, will aid the contented and industrious spirit to enjoy the comforts and many of the luxuries of life, of which others in the same employment and occupation in foreign countries are so greatly in need.

From considerations like these, (and others, too, might be mentioned,) if we are not mistaken, there is ground for cheering augury of agricultural improvement, which, though its progress may be gradual, will yet be certain and permanent, as well as productive of happy effects on our country and the world. That there is a rising feeling in favor of agriculture, the ten thousand voices echoing back from every quarter to us, in approbation of the humble efforts made from year to year in collecting, and, through their own representatives, laying before our farmers and planters the information of various kinds within our reach, abundantly testifies. We might, likewise, refer to the embodiment of this feeling in resolutions at the farmers' convention, (see account of this meeting, appendix No. 39,) urging the importance of their claims to regard, and as it meets us stronger and stronger from year to year in the agricultural journals in all parts of the country. Never was there a fairer time to aid its development. Without resorting to more questionable means, which might rather injure than benefit, it lies in the power of those who occupy places of influence, to lend a warm-hearted co-operation to every effort of improvement, and to diffuse as much as possible a generous spirit of enterprise into all the branches of agricultural industry. We indulge, we are sure, in no fancied dreams, when we say that the past years have only been the harbinger of a more perfect agricultural economy. It is with presages like these, while we see our bounds enlarged, we watch every indication of the awakening of the mind of our country to the importance of true science and practical knowledge. It is matter of gratulation to learn that a new agricultural journal has made its appearance, like a star first breaking through the darkness, in any section of our land which, till recently, could furnish no such proof of advancing knowledge. The information that a successful experiment, too, has added another name to the list of our products, or that the introduction of some choice specimen, either animal or vegetable, has brought to the agriculturists of those states the means of yet greater progress in improvement, is read with the confident expectation that another impulse has been given to the energies of industry, the results of which after ages will record with grateful satisfaction. Compared to the whole, each individual enterprise is but as a pebble dropped into the wide waters; but as even that slight motion agitates the nearest surface, and one wave after another spreads silently on, yet further and further from the place where it begun, so the community, in increasing circles, will feel the effect of every such event. One and another will follow on — a township, a county, a state, and yet larger portions of our country will in turn welcome the stranger, till it shall have made itself a home, and become domesticated and acclimated among our products.

Esto perpetua! is the prayer of every patriot as he casts his eye over our land of varied clime, and soil, and product, and people. With no stinted hand have the gifts of a kind Providence been strewn around us. The earth and its increase — flowers, fruits, animal, bee, worm and fowl — all bear their tribute to supply our wants; and so profuse are the means of sustenance and comfort, that every year, almost, only serves to lap us in greater plenty. It is to agriculture —

> 'The art that calls the harvests forth,
> And feeds expectant nations' —

we must look as the oldest employment, and the most necessary occupation of man. Honored, it will make our country glorious in the true strength of a nation — its virtue, intelligence, and enterprise. Neglected, the arm of prosperity will be shattered, and our experiment may end in doubt and dismay.

The Columbus Horticultural Society meets regularly every *Thursday evening*, at Ambos' Saloon. Members of the Society, and all who have fine fruits or flowers, — including ladies, of course, — are invited to attend and bring specimens. Some of the late meetings have been quite interesting.

Sale of Virginia Lands in England.— Wilmer & Smiths Enropean Times says.—We perceive, by the Liverpool papers, that Mr Thomas Rawlings, favorably known in New York as the editor of "*The Old Countryman and Emigrant's Friend*," has arrived amongst us. We understand Mr Rawlings contemplates establishing a Land Agency in Liverpool for the sale of lands in America, and that he is already entrusted with upwards of Two Million Acres, 900,000 of which are situate in Western Virginia, and intended to be settled by industrious farmers of moderate means. The owners have instructed him to sell every alternate lot, of 150 acres, for £23 8s. 8d., requiring only £2 12s. in advance, and the remainder in five annual payments. It is not improbable the repeal of the Corn-laws may have a tendency in promoting the object of Mr Rawling's visit.

English News.

Wilmer & Smith's Liverpool Times of June 19, says the weather had been very hot in England, and favorable for the wheat crop, which gave promise of an abundant and early harvest.

The corn law bill was making sure progress in the House of Lords, and no doubts remained of its final passage. The trade in wheat and flour continued very dull, with no material change in prices. Provisions were also dull, excepting cheese, of which the stock was exhausted, and fine sorts were in demand.

THE MARKETS.

Cincinnati, *July* 13. — Flour, 2.50@2.56; Wheat, 43 @45cts; Corn, 20@22: Oats, 20@22; Barley, 33; Rye, 4 cts; Butter, for packing, 7@7½cts — retail in market, 10@12½ to 15cts ℔ lb. Cheese has advanced a trifle, and is in good demand at 5½@6cts ℔ lb. No change in Wool.

New York, *July* 10. — Flour, Genesee and good Western, 4.00@4.06 ℔ bbl; Wheat, 9 @95cts; Corn, mixed Western, 45@47cts; Oats, 34; Barley, 60; Rye, 65cts ℔ bu; Ohio Pork, Mess, 9.5 ℔ bbl — Prime, 7.50; Ashes, Pots, 3.50 — Pearls, 4.00 ℔ 100 lb.

COLUMBUS PRODUCE MARKET.

Corrected for the Ohio Cultivator, July 14.

Grain.				**Poultry.**			
Wheat, ℔ bu.,	45	a		Turkeys, each,		a	
Indian corn,	18	a	20	Geese, "		a	
Oats,	12½	a	14	Ducks, "		a	
Provisions.				Chickens, "	6	a	8
Flour retail, bbl.,	2,75	a	2,87	**Sundries.**			
" 100 lbs.	1,75	a		Apples, bu.	44	a	50
" Buckwheat,		a		" dried,	87	a	1,00
Indian meal, bu.	25	a		Peaches, dried,	2,00	a	2,50
Hominy, quart,	3	a	4	Potatoes, new	44	a	50
Beef, bd. qr				Hay, ton,	5,00	a	
" 100 lbs.,	3,00	a	3,50	Wood, hard, cord,	1,25	a	1,50
" fore qr.,	2,00	a	2,50	Salt, bbl.,	1,75	a	1,81
Pork, mess, bbl.	8,50	a	9,00	**Seeds.**			
" prime, "	6,50	a	7,00	Clover, bu.,	4,25	a	4,50
Hams, country, lb.,	5	a	6	Timothy,		a	
" city, cured,	7	a	8	Flax,	75	a	81
Lard, lb., ret.,	6½	a		**Ashes,**			
" in kgs. or bls.	6	a		Pot, 100 lbs..	2,75	a	3,00
Butter, best rolls,	10	a		Pearl,	3,50	a	3,75
" common	8	a	9	Scorched salts,	2,50	a	
" in kegs,	6	a	7	Wool, common,	18	a	20
Cheese,	5½	a	6½	" half bl'd,	20	a	23
Eggs, dozen,	6	a	7	" full bl'd,		a	
Maple sugar, lb.	5		6				
" molasses, gal,	50						
Honey comb, lb.	10	a	12½				
" strained	12½	a	14				

GREAT SALE OF BLOODED CATTLE,

THE Subscriber will sell at public auction, on Wednesday, July 29, 1846, at his Farm, on Paint Hill, near Chillicothe, an extensive lot of THOROUGH BRED IMPROVED SHORT HORNED DURHAM CATTLE, bred from those imported by the Ohio Importing Company in 1834, '35, and '36; consisting of about 65 *HEAD OF BULLS, COWS, HEIFERS, and CALVES*, thoroughbred, together with about 30 *HEAD OF MIXED BLOOD.*

The pedigree of the above cattle will be given on the day of sale.

The Subscriber will have no by-bidders, and the whole stock will be sold to the highest and best bidder, the owner reserving one bid only, on five or six head.

Terms of Sale.—A credit of twelve months will be given, with approved security, or ten per cent. discount for cash.

The cattle can be examined at any time between now and the day of sale, by calling on the subscriber.

The reason why the subscriber wishes to sell the above cattle is, that his stock is getting too large for him to superintend in his advanced stage of life. GEORGE REMICK,

Chillicothe, July 1, 1846.

FARMERS' HARDWARE.

T. P. ELLIS & Co., at the old stand of R. Ellis & Co., have now on hand a large and complete assortment of Hardware, Cutlery, Iron, Nails, Glass, Steel and Castings; also Farming and Mechanical Tools, and every article in the Hardware line, which they are now selling at prices lower than ever before offered in Columbus.

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4 doz. Salisbury's warranted Cradles, with Patent Scythes.
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30 " Granville Hay Rakes, Bow and Common.

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Columbus, June 15, 1846.